

54th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)  
Scientific and Technical Histories (2)

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“THE 1936 GREENWOOD LAKE MAIL ROCKET EXPERIMENTS: THE WORLD’S FIRST FLOWN  
LIQUID-FUEL ROCKET PLANES?”

**Abstract**

In the annals of aerospace history, Germany’s Heinkel 176 is usually acclaimed as the world’s first aircraft to be propelled solely by a liquid-propellant rocket, making its first powered flight on 20 June 1939 with Erich Warsitz at the controls. However, upon closer examination, this is not entirely accurate since in early 1937, a prototype of the He 112, the He 112A V5 model, designed and built by engineer Wernher von Braun, then working as the Technical Director of Germany’s top secret rocket program that led to the A-4 or V-2 rocket, was flown with its Jumo 210D engine piston engine shut down during flight at which time it was propelled by rocket power alone. The sole purpose of that flight demonstrated the feasibility of rocket power for aircraft. However, technically-speaking the He 176 still rightfully deserves to be regarded as the first pure liquid-propellant rocket manned plane that was fully powered by this type of power-plant. The He-176 prototype also eventually led to the Messerschmitt Me 163, the world’s first rocket-powered combat interceptor that saw service during World War II.

Nevertheless, there were some earlier antecedents of the liquid-propellant rocket aircraft although they were not manned. One, for example, appeared as early as June 1928 in which a remarkably long-duration liquid-propellant rocket motor, apparently built by the German engineer Josef Schaberger, was fitted into a Mueller-Griesheim two-seat high-wing monoplane aircraft and the motor then static-fired although the plane was never flown. Moreover, the plane was intended by the financial supporter of this project, Fritz von Opel, to be used to fly over the English Channel although due to lack of interest on the part of the German government and industry, this plan was never realized. Hopefully, a future IAC history paper will eventually be produced to cover that development. Another project was the construction—and flights—of two small-scale unmanned rocket planes in early 1936 from Greenwood Lake, New Jersey, USA, in attempts to carry mail from one American state (New Jersey) to another state (New York). The present paper will focus strictly upon the Greenwood Lake experiments that also marked an interesting and highly colorful chapter in the history of early mail rocket experiments. The paper is based upon hitherto unpublished sources, besides many contemporary published sources since these experiments were very widely publicized at the time, as well as filmed as news events for the general public.